



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/587,948	06/06/2000	George P. Pollack	029169-9001	9711
7590 12/10/2004			EXAMINER	
BARRY W SUFRIN MICHAEL BEST & FRIEDRICH LLP 401 NORTH MICHIGAN AVE #1700 CHICAGO, IL 60611			FIGUEROA, FELIX O	
			ART UNIT	PAPER NUMBER
			2833	

DATE MAILED: 12/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/587,948

Applicant(s)

POLLACK, GEORGE P.

Examiner

Felix O. Figueroa

Art Unit

2833

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-13 and 15-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-13 and 15-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klumpp, Jr. (US 2,982,938) in view of Takemasa (US 6,045,408).

Klumpp discloses an electrical terminal, comprising: (a) a crimp flange (21) having a pair of upwardly directed opposite side portions (22-24) and a bottom portion extending between and interconnecting the side portions; (b) at least one insulation piercing knife (26,27) integral with the crimp flange projecting from the bottom portion into the space between the side portions; and (c) a blade (20) extending from the crimp flange for insertion into an electrical socket. Klumpp discloses substantially the claimed invention except for the pre-formed channel and the barbs. Takemasa teaches the use of a plug housing (20) having a preformed channel (28) and an electrical terminal (50) having a blade (51), and a web portion (at 53) including a plurality of lance-formed barbs along the web portion for abutting against a wall of the preformed channel. This arrangement affords an easy assembly (col.4 lines30-32) and ensures correct contact alignment. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the electrical terminal of Klumpp having a web portion with a plurality of barbs for abutting against a wall of a pre-formed channel,

as taught by Takemasa, to provide easy assembly and ensure correct contact alignment.

Regarding claim 2, Klumpp discloses the at least one insulation piercing knife being a pair of insulation piercing knives (26,27) cut out and bent upwardly from the bottom portion of the crimp flange.

Regarding claim 3, Klumpp discloses the insulation piercing knives being disposed substantially in a tandem alignment with one another.

Regarding claim 21, Klumpp discloses the bottom portion being concave shaped.

Claims 5-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilbert (US 2,229,288) in view of Klumpp, Jr.

Gilbert discloses an electrical plug assembly, comprising: a plug housing (1) having opposite front and rear ends and defining a pair of spaced apart pre-formed channels (14) therethrough open at each of the opposite ends thereof; a pair of insulated conductors (col.2 lines 43-44) each having an end and an electrical wire and a layer of insulation covering the wire and being disposed at least partially within one of the channels of the plug housing; and a pair of electrical terminals (2,3) each being insertable into one of the channels of the plug housing at the front end of the plug housing, each terminal including: a blade extending from a cable-connecting portion for insertion into an external electrical socket for making an electrical connection. Gilbert discloses substantially the claimed invention except for the specific structure of the cable-connection portion. Klumpp teaches an electrical connector comprising: a plug housing (10); a pair of insulated conductors (13,14) each having an end and an

electrical wire and a layer of insulation covering the wire; and (c) a pair of electrical terminals (11,12), each terminal including a crimp flange (21) having a pair (22-24) of upwardly directed opposite side portions and a concave actuate-shaped bottom portion extending between and interconnecting the side portions; at least one insulation piercing knife (26,27) integral with the crimp flange projecting upwardly from the bottom portion into the space between the side portions; and a blade (20) extending from the crimp flange for insertion into an external electrical socket for making an electrical connection. The structure of Klumpp provides an efficient and strong electrical and mechanical connection between the terminals and the cables. It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the terminal with a cable connecting portion, as taught by Klumpp, to provide an efficient and strong connection.

Regarding claims 6 and 7, Gilbert discloses the housing and the terminals being of a one-piece construction.

Regarding claim 8, Klumpp discloses each of the electrical terminals having opposite ends; and the crimp flange of each the electrical terminal is disposed at a rearward position on the electrical terminal adjacent to one of the opposite ends.

Regarding claim 9, both Klumpp and Gilbert disclose the blade being disposed at a forward position on the electrical terminal opposite from the crimp flange and adjacent to the other end of the opposite ends of the electrical terminal and extending therefrom toward but spaced from the one opposite end of the electrical terminal.

Regarding claim 10, Klumpp discloses the at least one insulation piercing knife of the electrical terminal being a pair of insulation piercing knives (26,27) cut out and bent upwardly from the bottom portion of the crimp flange of the electrical terminal and disposed between the side portions of the crimp flange of the electrical terminal.

Regarding claim 11, Klumpp discloses the insulation piercing knives being disposed substantially in a tandem alignment with one another.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gilbert and Klumpp, and further in view of Takemasa.

Regarding claim 12, Gilbert, as modified by Klumpp, discloses substantially the claimed invention except for the undulating barbs. Takemasa teaches the blades (51) including a web portion (53) a plurality of undulating barbs (64) to securely fasten the electrical terminal to the housing. The use of barbs increases friction and so provides a stronger retention force for the terminal in the housing. Therefore, it would have been obvious to one of ordinary skill in the art would the time the invention was made to provide the terminals of Gilbert with barbs in order to increase friction and more securely retain the electrical terminal to the housing.

Claims 13, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilbert in view of Klumpp, Jr.

The structure shown by Gilbert inherently discloses the method claimed: a) providing a plug housing and a plurality of electrical terminals; b) passing a pair of insulated conductors through channels of the plug housing; c) aligning ends of the terminals with the portions of the wires that extend from the plug housing; d) crimping

the electrical terminal on the ends of the conductors; and e) securing the terminals on the channels of the housing. Gilbert discloses substantially the claimed invention except for the specific crimping structure of the terminal. Klumpp discloses an electrical terminal, comprising: (a) a crimp flange (21) having a pair of upwardly directed opposite side portions (22-24) and a bottom portion extending between and interconnecting the side portions; (b) at least one insulation piercing knife (26,27) integral with the crimp flange projecting from the bottom portion into the space between the side portions to provide a stronger and more stable mechanical interface between the terminals and the conductors. Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form the interface between the conductors and the terminals of Gilbert with a crimp structure, as taught by Klumpp, to provide a stronger and more stable mechanical interface between the terminals and the conductors.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gilbert and Klumpp, Jr. in view of Takemasa.

Gilbert discloses substantially the claimed invention except for the undulation on the web portion. Takemasa teaches the use of undulations on a web portion to help retain the terminal within a housing. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include undulations on the web portion of Gilbert, as taught by Takemasa, to better retain the terminal within the housing. However, Takemasa does not disclose undulations on opposite sides of the web portion. It would have been obvious to one having ordinary skill in the art at the

time the invention was made to locate undulations on opposite sides of the web portion, since it has been held that mere duplication of essential working parts involves only routine skill in the art. *St. Regis Paper Co. v. Bemis Co.*, 193 USPQ 8.

Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilbert and Klumpp, Jr. in view of Ozaki (JP 09-213436).

Gilbert inherently discloses the method claimed except for the provision of a strip to align the terminals. Ozaki discloses the use of a strip to align the terminals. Therefore, it would have been obvious the use of a strip to hold and align the terminals to accelerate the manufacture of the assembly.

Regarding claims 18-20, the order between the crimping of the terminal and the remission of the strips would have been an obvious matter of preference to one of ordinary skill in the art, since the applicant has not disclosed that the order between the two steps provides any advantage or solves any stated problem.

Response to Arguments

Applicant's arguments filed August 30, 2004 with respect to claims 1 and 5 have been considered but are moot in view of the new grounds of rejection.

Applicant's arguments filed August 30, 2004 with respect to claims 13 have been fully considered but they are not persuasive.

In response to Applicant's arguments that "Gilberts requires insulation removal and pinching of contact legs against the exposed conductor and therefore does not render claims 13 obvious, please note that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of

references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Please note that Klumpp teaches the crimping the electrical terminals on the end of the insulated conductors such that insulation on the conductors is penetrated.

In response to Applicant's argument on claim 17, regarding the rear entry of the contacts of Takemasa, please note that the use of barbs can be use with either rear or forward entry. The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

In response to applicant's argument that Ozaki "does not appear to teach removal of a strip between the terminals" please note that note that Figures 7, 10 and 1. A translation copy of the Ozaki reference is attached herewith.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within


TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Felix O. Figueroa whose telephone number is (571) 272-2003. The examiner can normally be reached on Mon.-Fri., 10:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on (571) 272-2800 Ext. 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ffr



P. AUSTIN BRADLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800